# CONTRIBUTIONS TO AN ORCHID FLORA OF COLOMBIA

BY

ALEX D. HAWKES (1)

During the past several years the writer has been amassing materials for a proyected illustrated monographic treatment of the Orchidaceae of Colombia. At an early date it became evident that the materials involved were insufficient for critical revisions of the vast majority of the complex genera involved. A large number of the typical specimens of Schlechter's myriad Colombian taxa were destroyed during the Second World War, and since they were in the main unicates, must in many cases —until further materials are available— remain relatively incompletely known.

The present series of papers is intended as an introduction to the study of Colombian orchids, in the hope that interested persons presently in the areas in which notable absence of data occurs will make additional materials available for future study. Thereby many of the difficult problems which now confront us will doubtless be clarified.

## 1. The Genus **Centropetalum** Ldl. in Colombia

The genus *Centropetalum* was erected in 1839 by John Lindley (*Sert. Orch.*, nº 21, *in nota*). The original species, *C. distichum* Ldl., however, was not described until five years later (in Bth., *Pl. Hartweg.* 150, 1844). Contemporary students consider the group to consist of nine species, all distributed in the Andes of Colombia, Ecuador, and Peru. Four of these are taken up in the present paper, occurring as they do within Colombian territory. *Centropetalum* is placed in the Subtribe *Pachyphyllinae* in the most recent study, the «Phylogenetical Lists of the Orchidaceae», by Alex D. Hawkes and A. H. Heller (in *Orchid Weekly* 1 (27): 273. April 1959).

---

(1) Editor, *The Orchid Journal*, and *The Orchid Weekly*

*Nasonia* Ldl. (in Bth., *Pl. Hartweg.* 150. 1844.) is here considered to synonymous with *Centropetalum* Ldl., this generic taxon having been based on highly superficial characters which do not seem to be of sufficient strength to warrant retention as a separate group.

## CENTROPETALUM Ldl.

**Centropetalum** Ldl., Orch. nº 21. 1839, **in nota**.

*Nasonia* Ldl. in Bth., Pl. Hartweg. 150. 1844
*Nasonia* Ldl. section *Centropetalum* (Ldl.) in Bth. & Hk. f., Gen. Plant. 3 (2): 571. 1883.

Epiphytic, bulbless, pseudomonopodial plants, very small to medium-sized. Leaves distichous, plane, more or less dorsiventral or rarely equitant, carnose, deciduous in time, the margins at times fimbriate to ciliolate. Flowers small to minute, usually purple or scarlet, few in number in short racemes produced from the upper leaf-axils. Sepals subequal, free or with the laterals partially connate, more or less carinate (especially the laterals) and forming a short mentum. Petals subequal to or broader than the sepals. Lip shortly unguiculate or sessile, basally connate with the column or almost free, entire or vaguely trilobate by means of a slight fold, lamellate in varying degree. Column sometimes dilated to form a small sac with the lip, petaloid or membranaceous-dilated, oblong or more or less lobulate; anther strongly descending or deflexed, convex, unilocular; pollinia 4, membranous, affixed to the anther, partly separated; stipes 2, more or less connate, or free to the base; gland linear, oblong or ovate. Capsule small, subglobose, tricostate.

### *Key to the Colombian Species*

1. Plants very large for the genus (to 3 dm. long). Lip lanceolate; callus solitary, 4-parted, borne below middle of lip... 2. *C. lanceolatum*

1. Plants not very large (much less than 3 dm. long). Lip otherwise than above.

2. Lip slightly excavated basally, lanceolate in anterior part, with 2 minute calli ....... .... ..............1. *C. Hartwegii*

2. Lip not excavated basally, ligulate throughout.

   3. Calli elongate, divergent. Apex of lip obtuse ........ .... ....... .... ....... ..4. *C. sanguineum*

   3. Calli very short. Apex of lip acute......3. *C. Myrtillus*

1. **Centropetalum Hartwegii** (Rchb.f.) Krzl. in Engl., Pflanzenr. IV,50 (Heft 83): 30. 1923

*Nasonia Hartwegii* Rchb.f., Xen. Orch. 1: 97. 1855

*Nasonia punctata* Ldl. in sched. [not in Bth., Pl. Harweg. 150. 1844]

Plants small. Stems strongly curved, very thick, densely covered with distichous rather fleshy leaves, to 10 cm. long, often more than 3 mm. in diameter. Leaves lanceolate, acute, thickly carnose, deeply rugose when dry, marginate, often minutely denticulate below the apex, to 2 cm. long and 5 mm. broad; leaf-sheaths very minutely ciliate on the margins, glossy, longitudinally costate. Racemes very short, produced from upper leaf-axils, 1-2-flowered; bracts minute, much shorter than pedicellate ovaries. Sepals ovate to triangular ovate, particularly the laterals high-carinate, forming a small mentum, acute, 8 mm. long. 1.5 mm. broad basally. Petals oblong-lanceolate, shortly acutish, as long as the sepals, 5 mm. broad. Lip slightly excavated basally, lanceolate anteriorly, obtusely acutish, medially undulate, as long as the sepals and petals, 2 mm. broad; calli 2, short, borne rather near the margins on the middle of the disc. Column broadly membranaceous-alate, minutely lobulate above; anther deflexed at the top of the clinandrium (!); base of column forming a small sac or spur with the lip. Ovary pedicellate, triquetrous, 1.5 cm. long. Capsule globular, trigonous or tricostate, 1.4 cm. long, 8-9 mm. thick.

NARIÑO: Pasto, *Triana 1371;* Pasto, *Hartweg 1416*. ANTIOQUIA: Medellín, *Roezl s.n.* EL VALLE (?): Auf Bãumen in geschlossen, ziemlich feuchten Wãldern, Westabhãnge der Zentral-Cordillere des Cauca in 3000-3300 m., *Lehmann 964*.

### 2. **Centropetalum lanceolatum** L.O. Wms. in Lilloa 3: 480. 1938

An epiphytic herb up to 3 dm. long. Roots slender, glabrous. Stem more or less curved, simple or branched, densely distichous-leaved. Leaves oblong-lanceolate, acute, minutely apiculate, coriaceous, about 3-3.5 cm. long, 7-11 mm. broad; leaf-sheaths persistent, striate, sheathing the stem. Racemes auxillary, 1-flowered, very short, in the axils of the upper leaves; bracts inconspicuous. Dorsal sepal elliptic- ovate, acute canaliculate, fleshy, about 6 mm. long and 3 mm. broad. Lateral sepals lanceolate, acute, about 8 mm. long and 1.5 mm. broad, fleshy, strongly keeled along the median line, somewhat gibbous at the base and forming a slight mentum. Petals oblanceolate, acute, about 6.5 mm. long and 1.25 mm. broad. Lip lanceolate, acute, the apex slighly naviculate, about 6 mm. long and 2 mm. broad; callus solitary, 4-parted, borne just below the middle of the lip. Column of the genus, about 5 mm. long, strongly winged, the wings lightly connate with the lip at the sides of the callus. Ovary pedicellate, trigonous.

CAUCA: Páramo de Guanacas, central Andes of Popayán at 3300-3500 m. alt., *Lehmann 8588*.

According to Williams (*l.c.*), «a collection with the same data as the above may belong to this species. It is *Lehmann 6756*... The Lehmann collections must be rather widely distributed in the herbaria of the world yet many of the specimens apparently have never been determined nor appeared in literature. Some of the specimens in the Ames Herbarium are without flowers and hence nearly indeterminable but many of them have fine flowers, as does the type of the present species».

This taxon is easily distinguished from all of the other known species of *Centropetalum* by its extraordinarily large vegetative stature, the narrow lip, and its single, quadripartite callus, and other floral details.

### 3. **Centropetalum Myrtillus** (Rchb.f.) Pfitz., Vergl. Morphol. 16. 1882.

*Nasonia Myrtillus* Rchb.f. in Bonplandia 3: 197. 1855.

Roots very long. Stems ascending, slightly curved, up to 10 cm. long, slender, entirely covered by the persistent leaf-sheaths. Leaves

BIBLIOTECA CENT
CANJE
Bogotá, Colomb

short, broadly oblong, obtusely acutish, marginate, 1.5 cm. long, 5-7 mm. broad, coriaceous, early deciduous; leaf-sheaths few-costate, short, the margins sparsely and minutely fimbriate. Peduncles very short, bibrachiate; bracts small, ovate, acute. Flowers purple. Sepals oblong, acute, 1 cm. long, the laterals obscurely carinate, forming a rather conspicuous mentum at the base, 1.2 cm. long. Petals oblong, shortly acutish, slightly shorter than the sepals, 1 cm. long, 3mm. broad. Lip 8-9 mm. long, ligulate, somewhat more lanceolate in anterior part, acute, very sligthly constricted in the middle, basally connate with the column-foot; calli 2, borne on the disc, very short, apically abrupt. Column broadly winged, petaloid, above repand and lobulate; anther anteriorly long-produced, retuse; gland proportionately large; rostellum long-descending, affixed; stipes 2, free to base. Ovary pedicellate, triquetrous.

SANTANDER: Am Vulkan Bucaramanga, *Schlim s.n.* NARIÑO: Wälder bei Pasto, *Jameson 442; Rimann s.n.; Lehmann 508.* ?: Bei Corales am Puracé, in 2700 m., *Lehmann s.n.*

4. **Centropetalum sanguineum** (Ldl.) Krzl. in Engl., Pflanzenr. IV, 50 (Heft 83): 30. 1923

*Nasonia sanguinea* Ldl., Orch. Linden. 18. 1846.
*Nasonia robusta* Schltr. in Fedde, Repert. Spec. Nov., Beih. 8:109. 1921

Stems basally ramose, robust, erect slightly curving, densely covered with distichous leaves, to 25 cm. tall (rarely more), 5-6 mm. thick (including the persistent leaf-sheaths). Leaves generally quickly deciduous, ligulate, acute, carinate, thickly carnose, very minutely denticulate below the apex, 4-5 cm. long, 5-7 mm. broad, glossy; leaf-sheaths persistent, when dry deeply and longitudinally sulcate, 7 mm. long, to 5 mm. broad. Racemes very short, numerous, 1-flowered (rarely biflorous). Flowers very dark orange-red or scarlet. Sepals oblong, obtusely acutish, 7-8 mm. long, about 2 mm. broad; lateral sepals strongly carinate, forming a short mentum with the columnn-foot, 7-8 mm. long, about 2 mm. broad. Petals obovate, shortly acutish, as long as the sepals, 2.5-3 mm. broad. Lip sigmoid when viewed from the side, ligulate, obtuse apically, slightly constricted medially, 7-8 mm. long; calli 2, descending from the middle of the disc, forceps-shaped, converging. Column strongly dilated from a narrow base, subpentagonous, apically shortly acutish. Ovary acutish. Ovary pedicellate, triquetrous, 1.2 cm. long.

SANTANDER: Auf der Sierra Pelada in 3300 m.ü.M., *Kalbreyer 740*.

TOLIMA: Schluchten des Vulkans Tolima, in 2000 m ü M., *Linden 1274*.

An attractive epiphyte with showy flowers, also known from Ecuador.